

09/929,488
250901/00

2

IN THE CLAIMS:

Please revise the claims to read as follows:

1. (Currently amended) An active matrix type liquid crystal display device comprising:
 - a thin film transistor (TFT) substrate having a common wiring and a source/drain wiring formed on a first substrate, said first substrate being provided with an insulating film covering said common wiring and said source/drain wiring, said insulating film being coated with a first alignment layer;
 - an opposite substrate, opposing to said TFT substrate, having a second alignment layer formed on a second substrate;
 - a liquid crystal held between said first alignment layer and said second alignment layer;
 - and
 - a common electrode and a pixel electrode wired in parallel with each other and being formed as parts of said common wiring and said source/drain wiring, respectively, so that an angle made between a direction in which said first alignment layer is subjected to an aligning treatment and a direction in which said second alignment layer is subjected to an aligning treatment is set to a value of 0.5 to 4.0 degrees, said value providing a setting that concurrently:
 - decreases a threshold voltage between the pixel electrode and the common electrode required to change a direction of said liquid crystal ~~therebetween~~, therebetween;
 - increases a response of switching of said liquid crystal, ~~crystal~~; and
 - increases a luminance of said liquid crystal, said luminance being an amount of light transmitted through said liquid crystal.

09/929,488
250901/00

3

wherein said value of said angle between said first and second alignment directions lies between approximately 0.5 degrees and approximately 4.0 degrees.

2. (Currently amended) The active matrix type liquid crystal display device according to claim 1, wherein said angle made between said direction in which said first alignment layer is subjected to said aligning treatment and said direction in which said second alignment layer is subjected to said aligning treatment is set to ~~a value of 1.5 to 2.0 degrees, said value of 1.5 to 2.0 degrees~~ further narrowing said setting to additionally control a contrast degradation of said liquid crystal, said angle to additionally control said contrast degradation being set within a range of approximately 1.5 to 2.0 degrees, said contrast degradation being due to an amount of light penetrating said liquid crystal in a state when no electric field is applied thereto.

3. (Previously presented) The active matrix type liquid crystal display device according to claim 1, wherein said direction in which said first alignment layer is subjected to said aligning treatment has an angle of 5 to 45 degrees with respect to a parallel direction in which said common electrode and said pixel electrode are wired in parallel with each other.

4. (Original) The active matrix type liquid crystal display device according to claim 1, wherein an angle made between a direction in which said second alignment layer is subjected to aligning treatment and a direction in which said common electrode and said pixel electrode are wired in parallel with each other is larger than an angle made between said direction in which said first alignment layer is subjected to aligning treatment and a direction in which said common electrode and said pixel electrode are wired in parallel with each other.

09/929,488
250901/00

4

5. (Original) The active matrix type liquid crystal display device according to claim 1, wherein said TFT substrate and said opposite substrate having said liquid crystal therebetween include a first substrate side polarizer and a second substrate side polarizer on opposite sides opposing to inner sides of said TFT substrate and said opposite substrate facing said liquid crystal, respectively, and in said first substrate side polarizer and said second substrate side polarizer, the absorption axis and transmission axis are mutually orthogonal, and any one of the absorption axis and the transmission axis of said first substrate side polarizer agrees with said direction in which said first alignment layer is subjected to aligning treatment.

6. (Previously presented) The active matrix type liquid crystal display device according to claim 1, wherein a distance between surfaces of said first alignment layer and said second alignment layer opposing to each other is set to a value of 1.0 μm to 6.0 μm .

7. (Previously presented) The active matrix type liquid crystal display device according to claim 1, wherein a distance between said common electrode and said pixel electrode wired in parallel with each other is set to a value of 2 μm to 15 μm .

8. (Original) The active matrix type liquid crystal display device according to claim 1, wherein a gate wiring of a thin film transistor is formed on said first substrate simultaneously with said common wiring.

09/929,488
250901/00

5

9. (Previously presented) The active matrix type liquid crystal display device according to claim 1, wherein an island disposed above said common wiring and comprising a semiconductor film is formed in said insulating film, and said island constitutes an active region of a thin film transistor.

10. (Currently amended) An active matrix type liquid crystal display device comprising:

a first substrate;

a first alignment layer formed on a surface of said first substrate;

a second substrate opposing said first substrate;

a second alignment layer formed on said second substrate; and

a liquid crystal chain held between said first alignment layer and said second alignment layer,

wherein, in the absence of a potential difference, a first end of said liquid crystal contacting said first alignment layer is rotated to form a first angle relative to a reference on said first substrate, a second end of said liquid crystal is rotated to form a second angle relative to the reference on said first substrate, and a value between said first angle and said second angle is set to provide an increase in speed of response to an applied excitation voltage as compared to a speed of response when said value is zero ~~degrees while~~ degrees, while concurrently decreasing a threshold voltage required to drive a direction change of said liquid crystal and increasing a luminance of said liquid crystal, said luminance being the amount of light transmitted through said liquid crystal.

09/929,488
250901/00

6

11. (Previously presented) The device according to claim 10, wherein an absolute value between said first angle and said second angle is set in a range between about 0.5 to about 4.0 degrees.

12. (Currently amended) The device according to claim 10, wherein an absolute value between said first angle and said second angle is in a range between about 1.5 to about 2.0 degrees, said narrower range additionally controlling a contrast degradation of said liquid crystal, said contrast degradation being due to an amount of light penetrating said liquid crystal in a state when no electric field is applied thereto.

13. (Previously presented) The device according to claim 14, wherein said first angle made from said first alignment layer subjected to an aligning treatment has an angle in a range between about 5 to about 45 degrees with respect to said reference on said first substrate, said reference being a longitudinal axis of said pixel electrode.

14. (Previously presented) The device according to claim 10, further comprising:

a common wiring and a source/drain wiring formed on said first substrate; and

a common electrode and a pixel electrode formed as parts of said common wiring and said source/drain wiring,

wherein said common electrode and said pixel electrode are wired in parallel with each other.

09/929,488
250901/00

7

15. (Previously presented) The device according to claim 10, wherein a black display is provided in the absence of the potential difference.

16. (Previously presented) The device according to claim 10, wherein light transmittance occurs in the absence of the potential difference.

17. (Previously presented) The device according to claim 15, wherein light transmittance occurs in said black display.

18. (Currently amended) A method of producing an active matrix type liquid crystal display device, said method comprising:

holding a liquid crystal between a first alignment layer and a second alignment layer,
wherein an angle made between a direction in which the first alignment layer is subjected to a first aligning treatment and a direction in which the second alignment layer is subjected to a second aligning treatment is set to a value of 0.5 to 4.0 degrees, said value providing a setting that concurrently:

decreases a threshold voltage between the pixel electrode and the common electrode required to change a direction of said liquid crystal ~~therebetween~~, therebetween;

increases a response of switching of said liquid crystal, ~~crystal~~, crystal; and

increases a luminance of said liquid crystal, said luminance being the amount of light transmitted through said liquid crystal.

said value being in a range of from approximately 0.5 degrees through approximately 4.0 degrees.

09/929,488
250901/00

8

19. (Currently amended) The method according to claim 18, wherein said angle made between said direction in which said first alignment layer is subjected to said aligning treatment and said direction in which said second alignment layer is subjected to said aligning treatment is set to a value of 1.5 to 2.0 degrees to additionally control a contrast degradation of said liquid crystal, said contrast degradation being due to an amount of light penetrating said liquid crystal in a state when no electric field is applied thereto, said value lying in a range between approximately 1.5 through approximately 2.0 degrees.

20. (Previously presented) The method according to claim 18, wherein said direction in which said first alignment layer is subjected to said aligning treatment has an angle of 5 to 45 degrees with respect to a direction in which a common electrode and a pixel electrode are aligned.